

CLAIMS:

1. A method of encoding input video information to provide corresponding encoded output data, the method comprising the steps of:
 - (a) receiving the video information comprising data corresponding to a sequence of image frames (20);
 - 5 (b) subdividing the data associated with each frame into a plurality of data blocks (30);
 - (c) transforming (45) data of each data block into a corresponding coefficient data block (50) recording at least spatial information present in its associated data block;
 - (d) scanning (55) according to a scanning route each coefficient data block (50) to
10 generate a corresponding rearranged data block (60);
 - (e) applying data compression (65) to the rearranged data blocks (60) to generate the encoded output data (15),
the method being operable in step (d) (55) to select automatically the scanning route in response to a degree of asymmetry in each coefficient block (50) to enhance data
15 compression of the video information present in the encoded output data (15), and wherein in step (d) (55) only a single scanning route is utilized for processing each coefficient data block (50) to generate its corresponding rearranged data block (60).
2. A method according to Claim 1, wherein a determination of the asymmetry in
20 each coefficient block controlling the scanning route in step (d) is dependent upon at least one of:
 - utilization of frame interlacing in the input video information;
 - spatial scaling aspect ratio of one or more image frames present in the video information;
 - 25 - pulldown material being present in the data of one or more of the image frames;
 - one or more scanning routes utilized for processing preceding image frames in the video information;
 - a degree of temporal motion occurring in a series of the image frames; and

- statistical data relating to earlier selected scanning routes and their associated data compression performance.
3. A method according to Claim 1, wherein field and frame macro modes of operation are provided in step (b), the field macro mode being operable to mutually isolate interlaced image frame line information according to their associated temporal instances to generate corresponding data blocks for transformation in step (c), and the frame macro mode being operable to maintain spatial correspondence between each image frame and its associated data blocks to generate corresponding data macro blocks for transformation in step (c).
4. A method according to Claim 1, wherein the scanning route utilized in step (d) for generating the rearranged data blocks is switchable for one or more of:
- a plurality of image frames;
 - individual image frames; and
 - within each frame image.
5. A method according to Claim 4, wherein the scanning route utilized is selected in response to a proportion of a plurality of image frames being of interlaced format relative a proportion thereof being of progressive format.
6. A method according to Claim 1, wherein transformation of data of each macro block into a corresponding coefficient data block recording at least spatial information present in its associated data block in step (c) is implemented using a discrete cosine transform.
7. An encoder (100; 200; 300) for encoding input video information to provide corresponding encoded output data, the encoder (100; 200; 300) comprising:
- (a) inputting means for receiving the video information comprising data corresponding to a sequence of image frames (20);
 - (b) first processing (110) means for subdividing the data associated with each frame (20) into a plurality of data blocks (30);

- (c) second processing means (110) for transforming data of each data block (30) into a corresponding coefficient data block recording at least spatial information present in its associated data block (30);
- (d) third processing means (110) for scanning according to a scanning route each
5 coefficient data block to generate a corresponding rearranged data block;
- (e) compressing means (110) for applying data compression to the rearranged data blocks to generate the encoded output data,
the third processing means (110) being operable to select automatically the scanning route in response to a degree of asymmetry in each coefficient block to enhance data compression of
10 the video information present in the encoded output data, and wherein the third processing means is operable to utilize only a single scanning route for processing each coefficient data block to generate its corresponding rearranged data block.
8. Software executable to process video information to generate corresponding
15 encoded output data according to the method of Claim 1.
9. Encoded output data generated using the method of Claim 1.
10. A data carrier having stored thereon encoded output data as claimed in Claim
20 9.